



Dart Hawkesbury  
1270 Aberdeen St Hawkesbury, ON K6A 1K7 Canada  
Tel (613) 632-5200  
Fax 613 632-5246

# Purchasing Receipts

Print

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
PO040984	MES002-VC	1	1	Net 30	M2024T3S.040	2024-T3 .040 Sheet : MATERIAL: 2024-T3 ALUMINUM SHEET AS PER QQ-A-250/4 OR AMS-QQ-A-250/4 OR AMS 4037 OR ASTM B209				96	9/28/2018	96		S114846	Stock	9/28/2018	\$ 9.44 / sf	5		\$905.90	Metaux Solutions
		2			M304R0.625	304 SS Round bar 0.625 : MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276 NOTE: AISI 303 NOT ACCEPTABLE receive ft				24		24		S115486	Stock	10/2/2018	\$ 4.40 / ft	1		\$105.60	Metaux Solutions
		3			M304S11GA	304/316 0.125 Sheet : MATERIAL: AISI 304/316 SS SHEET ANNEALED AS PER MIL-S-5059 OR AMS 5513 (304) OR AMS 5524 (316) OR ASTM A240 OR ASME SA240				64		64		S114838	Stock	9/28/2018	\$ 16.60 / sf	5		\$1,062.40	Metaux Solutions
		4			M304R0.375	304 Round Bar 0.375 : MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276 NOTE: AISI 303 NOT ACCEPTABLE receive ft				24		24		S115487	Stock	10/2/2018	\$ 2.75 / ft	1		\$66.00	Metaux Solutions
		5			M304R0.4375	304 Round Bar 0.4375 : MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276 NOTE: AISI 303 NOT ACCEPTABLE receive ft				12		12		S115488	Stock	10/2/2018	\$ 3.95 / ft	1		\$47.40	Metaux Solutions
		6			M303R1.000	303 Round Bar 1.00 : MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582 NOTE: 304/316 NOT ACCEPTABLE receive ft						12		S115489	Stock	10/2/2018	\$ 16.00 / ft	1		\$192.00	Metaux Solutions
		7			M1020TR2.125W.120	M1020TR2.125W.120 (-125) receive ft						12		S115490	Stock	10/2/2018	\$ 13.70 / ft	1		\$164.40	Metaux Solutions

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		8			M304TS0.750W.049	304 Sq Tube .75X.75X.049W ; MATERIAL: AISI 304/316 SEAMLESS STAINLESS STEEL SQUARE TUBING AS PER ASTM A554 MILL FINISH OR ASTM A269 MILL FINISH receive ft				600		600		S115491	Stock	10/2/2018	\$ 3.80 / ft	1		\$2,280.00	Metaux Solutions
		9			M6061T6T0.500W.058	6061-T6 Round Tube .500 X.058W ; MATERIAL: 6061-T6/T62/T6510/T6511 SEAMLESS TUBING AS PER WW-T-700/8 OR QQ-A-200/8 OR QQ-A-225/8 OR AMS 4080 OR AMS 40 82 OR AMS 4083 OR ASTM B210 OR ASTM B241 receive ft				168		168		S115492	Stock	10/2/2018	\$ 6.75 / ft	1		\$1,134.00	Metaux Solutions
		10			MT-4140-S- 3.000X3.500	AISI 4140 / 4142 Steel Bar 3.000 x3.500 MATERIAL: AISI 4140 / 4142 STEEL BAR MINIMUM ROCKWELL C = 28 Rc MAXIMUM ROCKWELL C = 32 Rc ASTM A29, AMS 6349, AMS 6382, AMS 6529, MIL-S- 5626, MIL-S-24093 MT-4140-				8		8		S115493	Stock	10/2/2018	\$ 113.83 / ft	1		\$910.60	Metaux Solutions
		12			MT-4140-S- 0.500x0.500	4140 Steel Sheet 0.500 X 0.500 ; MATERIAL: AISI 4140 / 4142 STEEL SHEET OR PLATE MINIMUM ROCKWELL C = 28 Rc MAXIMUM ROCKWELL C = 32 Rc ASTM A829, AMS 6395 receive ft				12		12		S115551	Stock	10/2/2018	\$ 7.30 / ft	1		\$87.55	Metaux Solutions

PO No	Supplier	Line Item No	Rel No	Terms	Purchased Item	Description	For Part No	Project	Equipment ID	Order Qty	Due Date	Received Quantity	Accounting Job No	Container No	Status	Receive Date	Price/Unit	Aging Days	Past Due	Total	Supplier Name
		13			M4140H-R3.000	4140 Round Bar 3.000 . AISI 4140H ROUND BAR PER AISI4140OR ASTM A304-02/A-434-BC/- A193-03-GRADE B7/A29-03/A322-91 OR UNS#-G41400 MINIMUM ULTIMATE TENSILE STRENGTH=100 KSI MINIMUM YIELD TENSILE STRENGTH=66KSI receive ft				6		6		S115494	Stock	10/2/2018	\$ 45.95 / ft	1		\$275.70	Metaux Solutions
Total:												1,038								\$5,633.25	

Plex 10/3/2018 12:37 PM darr.Tollis.Andrew



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

# **PURCHASE ORDER** **PO040984**

**Supplier:** MES002-VC  
Metaux Solutions  
2625 boul Jacques-Cartier Est  
Longueuil  
QC  
J4N 1L7 Canada  
Phone: 800 558 8858  
Fax: 514 633 8044

**PO No:** PO040984

**PO Date:** 9/11/18

**Due Date:** 9/20/18

**Purchase Order**

**Revision:**

**Revision Date:**

**Ship-To Contact:** Lavoie, Chantal  
Phone: clavoie@dartaero.com

*REVISED*

**Ship To:** 1270 Aberdeen Street  
Hawkesbury  
ON  
K6A 1K7 Canada  
Phone: 613-632-5200

**Via:** Ground

**Pymt Terms:** Net 30

**Freight Terms:**

**Special Comments:** quote no. 28900,28948,29016,28925

## Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
2 M		M304R0.625	SR584	304 SS Round bar 0.625 : MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276 NOTE: AISI 303 NOT ACCEPTABLE receive ft	Firmed	-	9/28/18	24 ft	0 ft	24 ft	\$4.40/ft	\$105.60
								24 ft			AT 18/10/03	
4 A		M304R0.375	SR384	304 Round Bar 0.375 : MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276 NOTE: AISI 303 NOT ACCEPTABLE receive ft	Firmed	-	9/28/18	24 ft	0 ft	24 ft	\$2.75/ft	\$66.00
								24 ft			AT 18/10/03	
5 A		M304R0.4375	SR7164	304 Round Bar 0.4375 : MATERIAL: AISI 304/316 SS ROUND BAR AS PER ASTM A276 NOTE: AISI 303 NOT ACCEPTABLE receive ft	Firmed	-	9/28/18	12 ft	0 ft	12 ft	\$3.95/ft	\$47.40
								12 ft			AT 18/10/03	
6 A		M303R1.000	SR13	303 Round Bar 1.00 : MATERIAL: AISI 303 SS ROUND BAR AS PER ASTM A582 NOTE: 304/316 NOT ACCEPTABLE receive ft	Firmed	-	9/28/18	12 ft	0 ft	12 ft	\$16.00/ft	\$192.00
								12 ft			AT 18/10/03	
7 A		M1020TR2.125W.120	DT21818	M1020TR2.125W.120 (.125) receive ft	Firmed	-	9/28/18	12 ft	0 ft	12 ft	\$13.70/ft	\$164.40
								12 ft			AT 18/10/03	





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# PURCHASE ORDER

## PO040984

### Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
8 <i>AT</i>		M304TS0.750W.049		304 Sq Tube .75X.75X.049W : MATERIAL: AISI 304/316 SEAMLESS STAINLESS STEEL SQUARE TUBING AS PER ASTM A554 MILL FINISH OR ASTM A269 MILL FINISH receive ft	Firmed	-	9/28/18	600 ft ✓ 600ft	0 ft	600 ft	\$3.80/ft	\$2,280.00 <i>AT 18/10/03</i>
9 <i>AT</i>		M6061T6T0.500W.058	ADS12058	6061-T6 Round Tube .500 X.058W : MATERIAL: 6061- T6/T62/T6510/T6511 SEAMLESS TUBING AS PER WW-T-700/8 OR QQ-A-200/8 OR QQ-A-225/8 OR AMS 4080 OR AMS 40 82 OR AMS 4083 OR ASTM B210 OR ASTM B241 receive ft	Firmed	-	9/28/18	168 ft ✓ 168ft	0 ft	168 ft	\$6.75/ft	\$1,134.00 <i>AT 18/10/03</i>
10 <i>AT</i>		MT-4140-S- 3.000X3.500	MP341H	AISI 4140 / 4142 Steel Bar 3.000 x3.500 MATERIAL: AISI 4140 / 4142 STEEL BAR MINIMUM ROCKWELL C = 28 Rc MAXIMUM ROCKWELL C = 32 Rc ASTM A29, AMS 6349, AMS 6382, AMS 6529, MIL-S- 5626, MIL-S-24093 MT-4140-	Firmed	-	9/28/18	8 ft ✓ 8ft	0 ft	8 ft	\$113.825/ft	\$910.60 <i>AT 18/10/03</i>
11		MT-O1-B-0.125X4.000	F184O1	AISI O1 Tool Steel Bar 0.125 X 4.000	Firmed	-	9/28/18	9 ft	0 ft	9 ft	\$25.19/ft	\$226.71



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## Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
12 ✓ AT		MT-4140-S-0.500x0.500	MP1241H	4140 Steel Sheet 0.500 X 0.500 : MATERIAL: AISI 4140 / 4142 STEEL SHEET OR PLATE MINIMUM ROCKWELL C = 28 Rc MAXIMUM ROCKWELL C = 32 Rc ASTM A829, AMS 6395 receive ft	Firmed	-	9/28/18	12 ft	0 ft ✓ 12 ft	12 ft	\$7.295833/ft	\$87.55 AT 18/10/03
13 ✓ AT		M4140H-R3.000	MR341H	4140 Round Bar 3.000 : AISI 4140H ROUND BAR PER AISI4140OR ASTM A304-02/-A-434-BC/- A193-03-GRADE B7/-A29-03/-A322-91 OR UNS#-G41400 MINIMUM ULTIMATE TENSILE STRENGTH=100 KSI MINIMUM YIELD TENSILE STRENGTH=66KSI receive ft	Firmed	-	9/28/18	6 ft	0 ft ✓ 6 ft	6 ft	\$45.95/ft	\$275.70 AT 18/10/03
14		MT-A513-T-0.500W0.065	DT12065	A513 Seamless Alloy Steel Round Tubing 0.500"dia. x 0.065" Wall  MATERIAL: ASTM A513 TYPE 5 (1020/1026) SEAMLESS ALLOY STEEL ROUND TUBING (DOM) ASTM A513 TYPE 5	Firmed	-	9/28/18	24 ft	0 ft	24 ft	\$3.50/ft	\$84.00
Grand Total:											\$5,573.96	



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**PURCHASE ORDER**  
**PO040984**

**Order Notes**

Procurement Quality Clauses

- A005 right of entry
- A012 chemical and physical test report
- A016 personnel qualification
- A017 raw material identification (as applicable)
- A026 certification of material conformance
- A041 quality management system
- A042 dart notification by supplier
- A043 retention of quality documents
  
- A048 counterfeit parts avoidance, detection, mitigation and disposition program
- A049 supplier awareness

CL

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit [www.dartaerospace.com](http://www.dartaerospace.com) for further explanation.

Plex 10/3/18 7:23 AM dart.lavoie.chantal

METAUX SOLUTIONS INC  
2625 BOUL JACQUES CARTIER EST  
LONGUEUIL, QUEBEC  
J4N 1L7 Tel.: 450 641-3330

# Shipping Order

25/09/2018

Order : 138058  
Reference : 40984  
Bid : 29016  
Ship : PICK UP / PICK UP

Customer: 6323336

DART AEROSPACE LTD  
1270, ABERDEEN STREET  
HAWKESBURY, ONTARIO  
K6A 1K7

## Ship To

Same

Tel.: 1 613 632-3336

Item No.	Description	Qty	Qty. Delivered	B/O Qty
SSQT34340494	1 X 12' ***** HT:14300498 AT 304 SQ TUBE .750 X .049 WALL ✓ 30 X 20' *****	600	600	Ø
ADS12058	HT:1BK060596 AT ALU TUB .500" X .058" DRANW ✓ 14 X 12' *****	168	168	Ø
MP341H	HT:171229a6 AT 4140 HTSR PLATE 3.00 THICK ✓ 1 X 3.5" X 96"	314	314	Ø
F18401	HT:94802 AT KETOS GFS .125 X 4 FL 36 CAN '✓ 3 PCES ✓	3	3	Ø
MP1241H	4140 HTSR PLATE TFHT .500" 1 X .500" X 144" R/L ✓	16	16	Ø
MR341H	HT:96017 4140 HTSR ROU 3.000 DIA ✓ 1 X 72"	6	6	Ø
DT12065	H:52041117 AT MS TUB .500 X .065 WALL DOM ✓ 1 X 18.58' HT:F686891	18.58	18.58	Ø

~~Signature~~  
Enrè par notre Commission

\*\*\* Continued on Next Page \*\*\*

## Shipping Order

25/09/2018

METAUX SOLUTIONS INC  
2625 BOUL JACQUES CARTIER EST  
LONGUEUIL, QUEBEC  
J4N 1L7 Tel.: 450 641-3330

Order : 138058  
Reference : 40984  
Bid : 29016  
Ship : PICK UP / PICK UP

Customer: 6323336

## Ship To

DART AEROSPACE LTD  
1270, ABERDEEN STREET  
HAWKESBURY, ONTARIO  
K6A 1K7

Same

Tel.: 1 613 632-3336

Item No.	Description	Qty	Qty. Delivered	B/O Qty
	***** FACTURER E-MAIL ***** SUPER IMPORTANT SUR LE PACKING SLIP INSCRIRE LES HEAT N			
	***** FACTURER E-MAIL ***** SUPER IMPORTANT SUR LE PACKING SLIP INSCRIRE LES HEAT N			
	***** FACTURER E-MAIL ***** SUPER IMPORTANT SUR LE PACKING SLIP INSCRIRE LES HEAT N			
AS04024	ALU SHE .040 2024-T3 ALCLAD 2 pces 4" X 12' ***** ✓	2	2	Ø
	ht: 275893b6 AT			
SR584	304 ROU .625 DIA ✓ 2 x 12' r/l	24	24	Ø
	HT: 801C AT			
SS112B4	304 SHEET .120 (11G) ✓ 2 x 4' x 8'	64	64	Ø
	HT: 854e AT			
SR384	304 ROU .375 DIA ✓ 2 X 12' R/L	24	24	Ø
	HT: 1711164 AT			
SR7164	304 ROU .437 DIA (7/16) ✓ 1 X 12, R/L	12	12	Ø
	HT: 594F AT			
SR13	303 ROU 1.000 DIA ✓ 1 X 14'	14	14	Ø
	HT: 428631 AT			
DT21818	MS TUB 2.125" X .125" WALL DOM ✓	12	12	Ø

\*\*\* Continued on Next Page \*\*\*

# KAISER ALUMINUM

Trentwood Works

PO Box 15108, Spokane Valley WA 99215-5108

15000 E Euclid, Spokane Valley WA 99216

Phone: (800) 367-2586

## CERTIFIED TEST REPORT

Serial Number

4517818

CUSTOMER PO NUMBER: U10893-13	WORK PACKAGE:	CUSTOMER PART NUMBER:	SHIP RUN/LOAD: 104326/3	GOV'T CONTRACT NUMBER:	
KAISER ORDER NO: 1265351-13	SHIP DATE: 8-JUL-2018	ALLOY: 2024	CLAD: ALCLAD	TEMPER: T3	PRODUCT DESCRIPTION: HT Flat Sheet
WEIGHT SHIPPED: 3297 LB	QUANTITY: 117 PCS EST.	TRUCK B/L #: 2074756	GAUGE: 0.0400 IN ( 1.0160 MM)	DIAMETER/WIDTH: 48.000 IN (1219.2 MM)	LENGTH: 144.000 IN (3657.6 MM)

MHU 2243723; LOT 275893B6: 117 pieces; 145691

### Certified Specifications

✓ AMS4462/RevA  
CMMP 019/RevD

✓ AMS-QQ-A-250/5/RevB  
✓ CMMP 025/RevV

✓ ASTM B 209/Rev14

Test Code: 1505

Lot: 275893B6

Cast 679

Drop 39

Test Results

Ingot 2

Melted in USA

(ASTM E8/B557)

(EN 2002-1)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T3	LT / 3 (Min:Max)	✓ 62.7 : 63.2 (432 : 436)	✓ 42.6 : 42.8 (294 : 295)	✓ 17.9 : 19.2

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual(wt%)	0.04 ✓	0.14 ✓	4.7 ✓	0.57 ✓	1.3 ✓	0.01 ✓	0.12 ✓	0.01 ✓	0.02 ✓	0.01 ✓	TOT 0.02

### ALLOY LIMITS

	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
2024												
MIN(wt%)	0.00	0.00	3.8	0.30	1.2	0.00	0.00	0.00	0.00	0.00	EACH	0.05
MAX(wt%)	0.50	0.50	4.9	0.9	1.8	0.10	0.25	0.15	0.05	0.05	TOT	0.15
Liner Alloy:	1230											
MIN(wt%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	EACH	0.03
MAX(wt%)	0.25	0.30	0.10	0.05	0.05	0.03	0.05	0.03	0.03	0.03	TOT	0.00

Aluminum Remainder



Trentwood Works

PO Box 15108, Spokane Valley WA 99215-5108  
15000 E Euclid, Spokane Valley WA 99216  
Phone: (800) 367-2586

## CERTIFIED TEST REPORT

Serial Number  
4517818

### CERTIFICATION

Kaiser Aluminum, Trentwood Works, is ISO 9001, AS9100, and ISO 14001 certified, and hereby certifies that all material shipped under this order:

- \* has been inspected, tested, and found to be in conformance with the requirements of the specifications indicated herein.
- \* All test equipment and measuring devices are calibrated and certified in accordance applicable specifications. For material thicknesses outside specification limits, mechanical properties are as shown herein and chemical composition meets specification requirements. Reported elongation values have been measured as elongation at fracture.
- \* was melted in the United States of America or a qualifying country per DFARS 225.872-1(a), was manufactured in the United States of America, and meets the requirements of DFARS 252.225 for domestic content.
- \* has been thermally processed in compliance with AMS 2772, where applicable.
- \* is mercury free, within the limits of detection of ASTM E1215 (< 1ppm).
- \* is in compliance with RoHS 2, European Union Directive 2011/65/EU.
- \* is in compliance with European Chemical Agency, ECHA, REACH regulations, (EC) No 1907/2006, and Kaiser regularly monitors these regulations for updates.
- \* is free of Conflict Minerals, as defined in Section 15.2 of the Dodd-Frank Act.
- \* is free of weld repair.
- \* meets the reporting requirements of EN10204, Type 3.1.

Any warranty is limited to that shown on Kaiser Aluminum's standard general terms and conditions of sale. Test reports are on file, subject to examination. Test reports shall not be reproduced except in full, without the written approval of the Kaiser Aluminum laboratory. The recording of false, fictitious or fraudulent statements or entries on the certificate may be punished as a felony under federal law.

Michael Peske, PT Lab Process Engineer

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: 2024-T3 ALUMINUM SHEET  
SPECIFICATION: QQ-A-250/4 OR AMS-QQ-A-250/4  
OR AMS-4697  
OR ASTM B209

PART NUMBER: M2024T3S XXX THK

WHERE "XXX" = SHEET THICKNESS (IN INCHES)  
EG. 0.063" THICK SHEET = M2024T3S 063

PREFERRED SIZE: XXX BY 4FT BY 10FT

RELEASED  
R 2009-03-03  
JAP

B	REFORMAT DWG. ADD ASTM B209 SPEC (2N D8-1), PAR 09-020A	CP	09.07.07
A	NEW ISSUE	DS	01.09.24
REV	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	09.07.07		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		REV B	
DRAWING NO. M2024T3S		SHEET 1 OF 1	
TITLE		SCALE	
2024-T3 SHEET SPEC		NTS	
COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS UNCLASSIFIED AND CONTAINS NO INFORMATION OF A NATURE THAT REQUIRES PROTECTION FROM UNRESTRICTED DISSEMINATION			



## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M2024735.040  
 DATE: 18/10/01

PO / BATCH NO.: P0010984/S114846

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 965F  
 QUANTITY INSPECTED: 965F  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.040"  
 THICKNESS RECEIVED: 0.040"  
 SHEET SIZE ORDERED: 4'x12'  
 SHEET SIZE RECEIVED: 4'x12'

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="checkbox"/> N	
CORRECT FINISH	<input checked="" type="checkbox"/> Y	N	
CORROSION	Y	<input checked="" type="checkbox"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/> Y	N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/> Y	N	ASTM B209
CORRECT THICKNESS	<input checked="" type="checkbox"/> Y	N	
PHOTO REQUIRED	Y	<input checked="" type="checkbox"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/> Y	N	HT: 27584386
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/> Y	N	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/> Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="checkbox"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="checkbox"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u> DATE: <u>18/10/01</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



North American Stainless Canada Inc.  
740 Imperial Road North  
Guelph, ON N1K1Z3  
Canada

# METALLURGICAL TEST REPORT

6870 Highway 42 East  
Ghent, KY 41045-9615  
(502) 347-6000

Certificate: 412494 7

212996

Date: 5/18/2018 Page: 1

Steel: 304/304L

Finish: CD

Your Order: C114497

NAS Order: PN 0093988 04 Heat Treat Code: 47,024

Corrosion: ASTM A262/15 Prac A/E OK

## PRODUCT DESCRIPTION:

Round Bar, Annealed, Cold Draw  
UNS 30400/30403 EN 10204 3.1, ASTM A484/16  
ASTM A276/17, ASTM A479/18, ASTM A182/16a CHEM ONLY,  
ASME SA479/18, ASME SA182/13 CHEM ONLY  
AMS 5639J, AMS 5647K, AMS QQS-763D, QQS-763P, ASTM F899/12b  
SOLUTION ANNEAL TEMP 1900F MIN, ASTM A320/17a CL 1 GR B8  
ASTM A193/16-ASME SA193/13 CL 1 GR B8

## REMARKS:

COMPLIES W/REQUIREMENTS OF DPAR 252.225-7009 EU DIRECTIVE  
2011/65/EU. ROHS. EAF+AOD+CC. NO WELD REPAIR. MELTED AND MFG  
IN USA FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

## Product Id

BJ5335 1

Skid # Diameter Size

.6250

Weight

1.296

-----Length----- Mark Pieces Commodity Code

144.00 35 1

## CHEMICAL ANALYSIS

NAS Heat 801C CM C % CO % CR % ES(Spain) US(United States) ZA(South Africa) JP(Japan) Lab Accreditation Bureau, ISO/IEC 17025, Certificate# L2323  
US Chemical Analysis per ASTM A751/14a

CM C % CO % CR %

US .016 .24 18.09

CU %

.43

MO %

1.40

NI %

.373

N %

.065

P %

8.50

.032

## MECHANICAL PROPERTIES

### Product Id

BJ5335 1

1 d

o i

c i

HB

.2YS

KSI

UTS

KSI

RA

%

Elong

% 4D

45.66

70.57

103.88

80.24

183.0

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical  
Dept. Mgr.

VDTC Y ADV

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 304/316 SS ROUND BAR  
(NOTE: AISI 303 NOT ACCEPTABLE)

ASTM A276

M304R/D.DDD  
DIA.

WHERE "D.DDD" = DIAMETER IN INCHES  
EG. 0.75" ROUND BAR = M304R0.750

SPECIFICATION:  
PART NUMBER:

RELEASED  
R 07/23/74

B	REFORMAT DWG. ADD SPECS (ZN D6-1)	CP	09.07.15
A	NEW ISSUE	AJS	08.03.03
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS		
DRAWN	97		
CHECKED	97		
MFG APPR.			
APPROVED			
DE APPR.			
DATE	09.07.15		
DART AEROSPACE LTD		REV. B	
HAWKESBURY, ONTARIO, CANADA		SHEET 1 OF 1	
DRAWING NO. M304R		SCALE	
TITLE		304/316 ROUND BAR	
NTS		NTS	
COPYRIGHT © 1987 BY DART AEROSPACE LTD.			
THE REFORMAT OF THIS DRAWING IS A SERVICE PROVIDED BY DART AEROSPACE LTD. TO ITS CUSTOMERS. IT IS NOT A SUBSTITUTE FOR THE ORIGINAL DRAWING.			

## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304RO.625  
 DATE: 18/10/03

PO / BATCH NO.: P0040984/5115486

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 24ft  
 QUANTITY INSPECTED: 24ft  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.625"  
 THICKNESS RECEIVED: 0.625"  
 SHEET SIZE ORDERED: -  
 SHEET SIZE RECEIVED: -

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y (N)	
CORRECT FINISH	(Y) N	
CORROSION	Y (N)	
CORRECT GRAIN DIRECTION	(Y) N	
CORRECT MATERIAL PER M-DRAWING	(Y) N	ASTM A276
CORRECT THICKNESS	(Y) N	
PHOTO REQUIRED	Y (N)	
CORRECT REF # TO LINK CERT	(Y) N	MT: 801C
CORRECT MATERIAL IDENTIFICATION	(Y) N	
CORRECT M# ON THE MATERIAL	(Y) N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y (N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y (N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AK</u> DATE: <u>18/10/03</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



North American Stainless Canada Inc.  
740 Imperial Road North  
Guelph, ON N1K1Z3  
Canada

## METALLURGICAL TEST REPORT

6870 Highway 42 East  
Ghent, KY 41045-9615  
(502) 347-6000

Certificate: 436826 2 Mail To:

Customer: 007060 50C

Ship To:

Date: 8/13/2018 Page: 1

Steel: 304/304L

Finish: 2B

Your Order: C115111

NAS Order: WN 0100010 03

Corrosion: ASTM A262/15; 180Bend-OK

### PRODUCT DESCRIPTION:

STAINLESS STEEL COIL, C.R. ANNEALED & PICKLED. UNS 30400/30403  
ASTM A240/17, A480/16b, A666/15, ASME SA240/17, SA480/17, SA666/17  
CHEM ONLY ON FOLLOWING ASTM: A276/17, A479/17, A484/16, A312/16  
CHEM ONLY ON FOLLOWING ASME: SA312/13, SA479/13  
AMS 5511H/5513J XMRK; MIL-5059D AMD3 (X CRN MEAS); MIL-4043B  
NACE MR0175/ISO 15156-3:2009 A, MR0103/07; Q08766D-A X MAG PERM  
MIN. SOLUTION ANNEAL TEMP 1900F, WATER QUENCHED

### REMARKS:

Mat'l is Free of Mercury Contamination. No weld repairs.  
EN 10204:2004 3.1; ROHS 1 & 2 Compliant  
Material is Free of Radioactive Contamination  
Steel Making Process: EAF, AOD, & Cont. Casting  
Product Mfg. by a Quality Mgt. Sys. in Conf. w/ISO 9001  
\*Malted & Manufactured in the USA; Mat'l is DFARS Compliant

Product Id	Coil #	Skid #	Thickness	Width	Weight	Length	Mark	Pieces	Commodity Code
02854E CK	02854E C		.1200	48.0000	1.076	SHEETS		096.00	7

CHEMICAL ANALYSIS									
CM		C %	CR %	CU %	MN %	MO %	N %	NI %	P %
US		.0202	18.0700	.4010	1.7795	.3125	.0799	8.0430	.0325
SI %		.0010							
SI %		.2690							

HEAT  
854E

ANAB, ISO/IEC 17025, Certificate# L2323  
Chemical Analysis per ASTM A751/14a

### MECHANICAL PROPERTIES

Product Id#	Coil #	1 d o i c r	UTS KSI	20C KSI	.2% YS KSI	20C ELONG % 2"	Hard RB
02854E CK	02854E C	F T	92.28	42.79	54.85	84.00	86.00

Tail  
Hard

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical  
Dept. Mgr.

KRIS LARK

8/13/2018

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 304/316 SS SHEET  
ANNEALED

SPECIFICATION:

MIL-S-5059  
OR AMS 5513 (304)  
OR AMS 5524 (316)  
OR ASTM A240  
OR ASME SA240

FINISH:

FINISH  
UNPOLISHED No. 1  
UNPOLISHED No. 2D  
UNPOLISHED No. 2B  
POLISHED No. 3  
POLISHED No. 4  
BUFFED No. 6  
BUFFED No. 7  
BUFFED No. 8

DART MATERIAL IDENTIFIER  
1P  
2D  
NONE  
3P  
4P  
6P  
7P  
8P

PART NUMBER:

M304S TT GA #P  
GA

WHERE "TT" = GAUGE THICKNESS  
WHERE "P" = FINISH IDENTIFIER

EG. 16 GAUGE SS SHEET 2B FINISH = M304S16GA  
EG. 16 GAUGE SS SHEET No. 4 POLISHED = M304S16GA4P

GAUGE THICKNESS REFERENCE:

GAUGE	NOM. THICK. (IN)	THICKNESS RANGE (IN)
26	0.01875	0.0178 - 0.019
25	0.021875	0.0199 - 0.023
24	0.025	0.024 - 0.026
23	0.028125	0.027 - 0.029
22	0.03125	0.030 - 0.032
21	0.034375	0.033 - 0.035
20	0.0375	0.036 - 0.040
19	0.04375	0.041 - 0.046
18	0.050	0.047 - 0.052
17	0.05625	0.053 - 0.058
16	0.0625	0.059 - 0.065
15	0.0703125	0.066 - 0.072
14	0.078125	0.073 - 0.083
13	0.09375	0.084 - 0.098
12	0.109375	0.099 - 0.114
11	0.125	0.115 - 0.130
10	0.140625	0.131 - 0.145
9	0.15625	0.146 - 0.160
8	0.171875	0.161 - 0.176
7	0.1875	0.182 - 0.194
6	0.2031	0.194 - 0.212
5	0.2188	0.201 - 0.228
4	0.2344	0.225 - 0.243
3	0.2500	0.238 - 0.262
2	0.2656	0.254 - 0.278
1	0.2813	0.269 - 0.293
0	0.3125	0.301 - 0.325

RELEASED  
2015 FEB 04  
ECS 15-122 q

D	ADDED GAUGES 0-7	AJS	15 01 06
C	DEFINED FINISH OPTION (ZN C8) AND EXAMPLE OF MATERIAL FIN WITH FINISH OTHER THAN 2B (ZN B5)	MB	12 09 20
B	REFORMAT DWG. ADD ASTM/ASME SPECS (ZN D8-1), ADD GAUGE REF (C8-1), REF PAR 08-020A	CP	09 06 01
A	NEW ISSUE	DS	01 09 24
REV.	DESCRIPTION	BY	DATE
DESIGN	DS		
DRAWN	AJS		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	15.01.06		

DART AEROSPACE LTD	
HAWKESBURY, ONTARIO, CANADA	
DRAWING NO.	M304S
TITLE	304/316 SS SHEET
REV. D	SHEET 1 OF 1
SCALE	NTS

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SPECIFICALLY REQUESTED BY THE USER. THE USER SHALL BE RESPONSIBLE FOR THE PROTECTION OF THIS DOCUMENT.

# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304S116A  
 DATE: 18/10/01

PO / BATCH NO.: P004984/S114838

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 645F  
 QUANTITY INSPECTED: 645F  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.125"  
 THICKNESS RECEIVED: 0.120"  
 SHEET SIZE ORDERED: 8'x4'  
 SHEET SIZE RECEIVED: 8'x4'

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT FINISH	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORROSION	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT GRAIN DIRECTION	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT MATERIAL PER M-DRAWING	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	ASTM A240
CORRECT THICKNESS	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT REF # TO LINK CERT	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	HT: 854E
CORRECT MATERIAL IDENTIFICATION	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT M# ON THE MATERIAL	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u>	SIGNED OFF BY: _____
DATE: <u>18/10/01</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in





# CHANDAN STEEL LIMITED

(GOVT. OF INDIA RECOGNISED EXPORT HOUSE)

ISO 9001:2008 CERTIFICATE No. 01 00011022

ADM. OFFICE: 504, SUKH SAGAR, N. S. PATKAR MARG, MUMBAI 400012, INDIA

Tel.: 91-22- 66290600, Fax.: 91-22-66290633/34

Website : www.chandansteel.net

Email : cs@chandansteel.net

L/c. No.:

L/c. Date:

WORKS: PLOT NO. 31 TO 35, 45, 46, 48, & 49/2, 142

(EXP. AREA) GIDC, UMBERGAON & SURVEY NO. 102/2 & 3, VILLAGE,

DEHARI, TALUKA: UMBERGAON, DIST: VALSAD, GUJARAT - 396171

GSTIN - 24AAACC3719B1ZG

F824 QC 09A / 02 / 10.12.2012

## MILL TEST / INSPECTION CERTIFICATE 3.1 ACCORDING TO EN 10204 : 2005

Test Certificate No. : EXP/01152 - 06/2017-2018

Date of Issue : 03.01.2018

P. O. No. : MN5942

SC No. & Date : 17-18/00447, Dt. 08.11.2017

Invoice No. & Date : EXP/01152/2017-18 Dt. 03.01.2018

PRODUCT DESCRIPTION				LENGTH		Net Wt.
STAINLESS STEEL ROUND BARS				Ordered	Actual	2965 Lbs.
Heat No.	Grade AISI	Size mm/inches	Tolerance	12' - 14'	12' - 14'	
1711164	304L	3/8"	h9			
				Process Route		
				Electric Melting, A.O.D. Refining, Continuous Casting		

### CHEMICAL COMPOSITION (Weight %)

	C	Si	Mn	P	S	Cr	Mo	Ni	Cu	Ti	N
Min.	-	-	-	-	-	18.00	-	8.00	-	-	-
Max.	0.030	1.00	2.00	0.045	0.030	20.00	-	12.00	-	-	-
Results	0.028	0.37	1.57	0.039	0.016	18.55	-	8.04	-	-	-

### MECHANICAL PROPERTIES

Specified Value	Yield Strength N/mm <sup>2</sup> /MPa (Rp0.2)	Tensile Strength N/mm <sup>2</sup> /MPa (Rm)	Elongation %	Reduction of Area %	Hardness (HB)
Min.	310	620	30	40	-
Max.	-	-	-	-	-
Results	615	786	36	65	239-242

### Remarks:

1. Cold drawn & Centreless Ground.
2. Solution annealed at 1050 °C.
3. PMI test done 100% & found Satisfactory.
4. Material is free from radio-active contamination.
5. Inter-Granular Corrosion Test as per ASTM A262 - 15 (Pr.E) satisfactory.
6. The material conforms to ASTM A276-15/A182-15/A479-15 & ASME SA479-13 Specifications.
7. Location of sample - Centre, Direction - Longitudinal, Test Temp - Room Temp., Shape of Test Piece - Round.
8. Marking details - Company Logo, Size, Grade & Heat No.
9. The material is manufactured/melt in Chandan Steel Mill and is of Indian Origin.
10. No welding/weld repairs was performed on this material.

BUNDLE NO.: 21 & 22



B. S. RAUTBLA

MANAGER - QUALITY ASSURANCE

It is hereby certified that the above results are true and correct in every details and are meeting the requirements of specification & purchase order.



# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 304/316 SS ROUND BAR  
(NOTE: AISI 303 NOT ACCEPTABLE)

SPECIFICATION:

PART NUMBER:

ASTM A276

M304R/D DDD  
DIA

WHERE "D.DDD" = DIAMETER IN INCHES

EG. 0.75" ROUND BAR = M304R0.750

RELEASED  
07/25/18

B	REFORMAT DWG. ADD SPECS (ZIN D6-1) REF P/PAR 08-02DA	CP	09.07.15
A	NEW ISSUE	AJS	08.03.03
REV	DESCRIPTION	BY	DATE
DESIGN	AJS		
DRAWN	g		
CHECKED	h		
MFG. APPR.	M304R		
APPROVED	M		
DE APPR.	M		
DATE	09.07.15		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO.		REV. B	
M304R		SHEET 1 OF 1	
TITLE		SCALE	
304/316 ROUND BAR		NTS	
COPYRIGHT © 2008 BY DART AEROSPACE LTD			

## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304R0.375  
 DATE: 18/10/03

PO / BATCH NO.: P0040984/S115487

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 244  
 QUANTITY INSPECTED: 244  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.375"  
 THICKNESS RECEIVED: 0.375"  
 SHEET SIZE ORDERED: -  
 SHEET SIZE RECEIVED: -

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="radio"/> N	
CORRECT FINISH	<input checked="" type="radio"/> Y	N	
CORROSION	Y	<input checked="" type="radio"/> N	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y	N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y	N	ASTM A276
CORRECT THICKNESS	<input checked="" type="radio"/> Y	N	
PHOTO REQUIRED	Y	<input checked="" type="radio"/> N	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y	N	MT: 1711164
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y	N	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="radio"/> N	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="radio"/> N	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u>	SIGNED OFF BY: _____
DATE: <u>18/10/03</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



# METALLURGICAL TEST REPORT

6870 Highway 42 East  
Chenit, KY 41045-9615  
(502) 347-6000

Certificate: 362259 1

207142

Date: 12/11/2017 Page: 1  
Steel: 304/304L  
Finish: CD

Your Order: C113029

NAS Order: IN 0256557 01

Heat Treat Code: 44,429

Corrosion: ASTM A262/15 Prac A/Z OK

## PRODUCT DESCRIPTION

Round Bar, Annealed, Cold Draw  
UNS-30400/30403 EN 10204 3.1, ASTM A484/16  
ASTM A276/17, ASTM A479/17, ASTM A182/16a CHEN ONLY,  
ASME SA479/13, ASME SA182/13 CHEN ONLY,  
AMS 5647J, AMS Q38-763D, Q38-763P, ASTM F899/12b  
SOLUTION ANNEAL TEMP 1900F MIN, ASTM A320/17a CL 1 GR B8  
ASTM A193/10A-ASME SA193/10 CL 1 GR B8

## REMARKS:

COMPLIES W/REQUIREMENTS OF DPAF 252.225-7009 EU DIRECTIVE  
2011/65/EG, ROHS. EAF+ROD+CC. NO WELD REPAIR. MELTED AND MFG  
IN USA FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

Product Id	Skid #	Diameter	Size	Weight	Length	Mark	Pieces	Commodity Code
BJ1604 9		.4375		654	144.00	1	1	

CHEMICAL ANALYSIS									
CM		CM(Country of Met)		ES(Spain)		US(United States)		ZA(South Africa)	
594F									
US		C %	CO %	CR %	CU %	MN %	NI %	MO %	P %
		.020	.23	18.13	.36	1.44	.293	.071	8.60
		S %	SI %						.030
		.0285	.24						

MECHANICAL PROPERTIES									
Product Id		1 d 0 1 C I		HB	Mo.	.2YS KSI	UTS KSI	RA %	Elng %
71604 9		R L		233.0		77.29	108.45	70.50	41.00

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL: AISI 304/316 SS ROUND BAR  
(NOTE: AISI 303 NOT ACCEPTABLE)

**A** SPECIFICATION:  ASTM A276  
PART NUMBER: M304R0.0000 DIA. 1

WHERE "D.000" = DIAMETER IN INCHES  
EG. 0.75" ROUND BAR = M304R0.750

**RELEASED**  
10/28/2011

B	REFORMAT DWG. ADD SPECS (ZN D6-1)	CP	08.07.15
A	NEW ISSUE	AJS	08.03.03
REV	DESCRIPTION	BY	DATE
DESIGN	SS		
DRAWN	QA		
CHECKED			
MFG. APPR.	M304R		
APPROVED			
DE APPR.			
DATE	09.07.15		

DART AEROSPACE LTD		REV B
HAWKESBURY, ONTARIO, CANADA		SHEET 1 OF 1
TITLE		SCALE
304/316 ROUND BAR		NTS
COPYRIGHT © 2008 BY DART AEROSPACE LTD		

## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304R0.4375

PO / BATCH NO.: P0040984/S115488

DATE: 18/10/23

MATERIAL CERT REC'D: Yes

THICKNESS ORDERED: 0.4375"

QUANTITY RECEIVED: 12ft

THICKNESS RECEIVED: 0.4375"

QUANTITY INSPECTED: 12ft

SHEET SIZE ORDERED: —

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT FINISH	<input checked="" type="radio"/> Y <input type="radio"/> N	
CORROSION	Y <input type="radio"/> N <input checked="" type="radio"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y <input type="radio"/> N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y <input type="radio"/> N	AS1M: A276
CORRECT THICKNESS	<input checked="" type="radio"/> Y <input type="radio"/> N	
PHOTO REQUIRED	Y <input type="radio"/> N <input checked="" type="radio"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y <input type="radio"/> N	MT: 594F
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y <input type="radio"/> N	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y <input type="radio"/> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input type="radio"/> N <input checked="" type="radio"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input type="radio"/> N <input checked="" type="radio"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: _____ DATE: _____	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



# Acciaierie Valbruna S.p.A.

38100 VICENZA (Italia) - Viale della scienza, 25 z.s.  
Telefono 0444.688211 - Fax 0444.683838  
Sedi.: 39100 BOLZANO (Italia) - Via A. Volta, 4/37  
Telefono 0471.924111 - Fax 0471.924497

## CERTIFICATO DI COLLAUDO - ABNAHMEPRUEFZEUGNIS - INSPECTION CERTIFICATE - CERTIFICAT DE RECEPTION

In conformità a: EN 10204 (2004), 3.1

Certificato nr. MEST919213 / 2016 /

Stato di fornitura: Hot rolled - Annealed Cold Drawn  
Lieferzustand  
Delivery state  
Etat de livraison

Produttore:  
Hersteller/Hersteller  
ACCIAIERIE VALBRUNA S.P.A.

Ordine nr. 603005705 Stock - Canada  
Bestell  
Your order  
Commande

Tipo di Elaborazione: E+AOD  
Erstellungszustand  
Making process  
Mode d'élaboration

Marchi di Fabbrica:  
Zeichen des Lieferanten  
Trade marks  
O que de l'usine productrice

Conferma ordine nr. EI16003144  
Werk Auftragsbestätigung

Qualità: 303HS  
Werkstoffbezeichnung

Punzone del Collaudatore:  
Stempel des Werkstoffprüfingen  
Inspector's stamp/Position de l'inspecteur

Avviso di Spedizione: D-VI16021604  
Lieferanweisung/Expédition

Marca: MV188ZHS MAXIVAL  
Markenbezeichnung  
Brand/Usine

Punzonatura: 303HS  
Kennzeichnung  
Marking  
Marquage

### SPECIFICHE:

Anforderungen / Requirements / Exigences

Note:

Ausführungen / Notes / Notes

VSI 0 303 HS A,CF

AISI 303

AMS 5640 V S30300 A

AMS 5640 V TYPE1 A

ASME SA320 2015 B8F (D)

ASTM A314 2015 S30300

ASTM A320 2015A B8F (1)

ASTM A370 2015

ASTM A582 2012 S30300 A

MIL-S-862 B/1 303

QQ-S-764 B/2 303 A

(D) SECTION II PT A 2015 EDITION Chemical analysis only.

(1) Chemical analysis only.

Tolleranza: ASTM A484-16 TABLE 7

Pos. nr. Pos. n° No. de position	Objetto Objekt Object Objet	Dimensioni - in Abmessungen Dimensions Dimensions	Lunghezza - in Länge Length Longueur	Colata Gießerei Mould Coulée	Pezzi Einheiten Pieces Pièces	Peso - LB Gewicht Weight Poids	Lotto nr. Losn.-n° Lot no Lettre
0010	Round	1,0000	146/ 147	428631		2.238	613408080

### TEST ALLO STATO DI FORNITURA

TEST	Prova/ Prüfung Essai/ Prüfung Longitudinale Brinell Hardness Werkstoffprüfung Long. direction Long. direction	°F	Peso Gewicht Weight Poids	Snervamento Zugversuch Yield Point Rp 0,2%	Snervamento Zugversuch Tensile Strength Rm	Resistenza Zugversuch Tensile Strength Rm	Allungamento Zugversuch Elongation A50%	Strizione Zugversuch Reduction of Area RA	Resistenza Zugversuch Tensile Strength Rm	Durezza Härte Hardness HB
	Wert/richtig Anforderungen/Requirements Valeur/direction	min max								
A	12,5	68	L	73		102	42	57		140 255

### TEST ALLO STATO DI FORNITURA

TEST	min	max
A Grain size for ASTM E112		6

Mechanical properties according to ASTM A370.

### Analisi chimica

Colata Gießerei Mould	Min min	Max max	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	Zr %
428631	0,030 0,050	0,20 1,00	1,50 2,00	17,00 19,00	0,08 1,00	8,00 10,00		0,100 0,32	0,4000				
			0,040	0,37	1,92	17,41	0,53	0,60	8,24	0,090	0,030	0,33	0,0039

Vicenza, 05/09/16

VCO05 - MEST919213

(Mod. NCEZ)

Il collaudatore di stabilimento / der Werksachverständiger / Works Inspector / L'agent d'usine

M. Rizzotto

Pagina - 1 di 2

33871

# SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL - AISI 303 SS ROUND BAR  
(NOTE - AISI 304/316 NOT ACCEPTABLE)

SPECIFICATION:

PART NUMBER:

ASTM A582  
M303R0.750  
DIA.

WHERE "D DDD" = DIAMETER IN INCHES  
EG. 0.75" ROUND BAR = M303R0.750

RELEASED  
R 2010-02-02  
NR

B	REFORMAT DWG. ADD SPECS (ZN D8-1)	CP	10.01.05
A	NEW ISSUE	DS	01.12.20
REV	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.01.05		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
REV. B	SHEET 1 OF 1
DRAWING NO.	M303R
TITLE	303 ROUND BAR
SCALE	NTS
COPYRIGHT © 2001 BY DART AEROSPACE LTD.	

## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M303 R1.000  
 DATE: 18/10/03

PO / BATCH NO.: P0040984/S115489

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 1254  
 QUANTITY INSPECTED: 1254  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 1.000"  
 THICKNESS RECEIVED: 1.000"  
 SHEET SIZE ORDERED: —  
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT FINISH	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORROSION	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT GRAIN DIRECTION	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT MATERIAL PER M-DRAWING	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	ASTM A582
CORRECT THICKNESS	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
PHOTO REQUIRED	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT REF # TO LINK CERT	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	HT: 428631
CORRECT MATERIAL IDENTIFICATION	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
CORRECT M# ON THE MATERIAL	Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PERFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u> DATE: <u>18/10/03</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



# **Innoventive Industries Limited**

Regd. Office : Gat No. 1261, Sanpawadi, Pune- Nagar Road, Tal- Shirur, Dist- Pune 412 208  
 Maharashtra (India) Tel. : +91-2137-669001/669002 Fax: +91 2137 669014  
 Mega Project : Gat No.56/3, 4, 5, Village Pimple Jagtap, Tal. Shirur, Dist. Pune- 412 208  
 Maharashtra (India) Tel.: +91 2137 617042

## **MATERIAL TEST REPORT**

Format No.: QA/FRISA  
 Rev.No.: 04 Cr. Date: 16.03.2013

**CUSTOMER NAME :** SALEM STEEL NA, LLC  
**ADDRESS :** 80 RT 4 EAST, SUITE 169 PARAMUS, NJ 07652  
**PURCHASE ORDER NO & DATE:** AR14014-RM ON DTD. 27 FEB. 2014

**T.C.No.EXP/** 2976  
**DATE :-** 31.03.2014

**PRODUCT :** ELECTRIC RESISTANCE WELDED CARBON STEEL  
 MECHANICAL ROUND TUBING

**HEAT NO:-** 14300498  
**COIL NO. :-** 24C018  
**SUPPLIER NAME:-** JSW ISPAT STEEL LTD.  
**CITY:-** RAIGAD  
**COUNTRY:-** INDIA

**SIZE ( INCH ) :-** 2.125 1.885  
 O.D. I.D.

Outer Diameter (Inch)	2.125	Specification: AS PER ASTM A513-75, 1020 Stress Relieved (2012)
Inside Diameter (Inch)	1.885	Grade:- 1020
Thickness (Inch)	.....	Total Feet : 676.42
Length (Feet)	17-19	NO. Of Tubes (Nos.) 37

Chemical Analysis	%C	%Mn	%Si	%S	%P	%Al	%Ni	%Cr	%Mo
Specification	Min.	Max	Min.	Max	Min.	Max	Min.	Max	Min.
Observation	0.18	0.23	0.3	0.6	0.025	0.025	0.019	0.046	0.005
	0.185	0.423	0.020	0.005	0.019	0.046	0.005	0.012	NA

Mechanical Properties	Yield Strength In PSI	Tensile Strength In PSI	% Elongation	Hardness HRB
Specification	Min.	Max.	Min.	Max.
Observed	55000	78000	65000	80000
	70063	82038	18	78
			26	83

Dimensional Report	Outer Diameter In Inch	Inner Diameter In Inch
Specification	Min	Max
Observations	2.125	2.132
Sample 1	2.127	1.978
Sample 2	2.126	1.980
Sample 3	2.129	1.979
		1.981
		1.980
		1.982

### **VISUAL PARAMETERS :-**

NO Scratch/Line mark - checked & Found OK  
 NO Roll/Pickup mark - checked & Found OK  
 NO Pit/Dent/Damage/Crack - checked & Found OK  
 100% ECT(NDT) Done As per SB.2.1 - AS13 12: - checked & Found OK

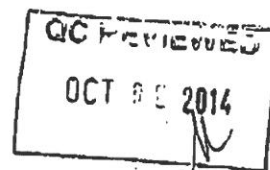
NOTE :- 1) Tubes conforms to specification 'Mercury Free'  
 2) Chemical composition have been verified from Raw material inspection records(RM Mill TC) & Spectro testing at IIL

Packing Details :

AR14014-RM - 3 - 1

Checked By :  
 Sign *Suchana N.*  
 Name Suchana N.

Approved By :  
 Sign *D. LAAD*  
 Name : D. LAAD



adm 2.125 x 1.20 x 1.885

2 1/8" X 1.120  
 D.O.M.



DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. M1020TR	REV. A SHEET 1 OF 1
DATE 05.01.19		TITLE AISI 1020-1025 TUBING	SCALE NTS
A	05.01.19	NEW ISSUE	

RELEASED  
05.01.21 *[Signature]*

PURCHASE MATERIAL: AISI 1020-1025 ROUND TUBING PER MIL-T-5066  
OR ASTM A513-00 M1020 SRA OR AMS 5075 OR  
AMS 5077, COLD DRAWN

PART NUMBER: M1020TR | D.DDD | W | .TTT | WHERE D.DDD = OD (IN INCHES)  
OD. | WALL | .TTT = WALL (IN INCHES)

EG. 0.750" x 0.125" WALL = M1020TR0.750W.125

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## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M1020TR2.125W.120  
 DATE: 18/10/03

PO / BATCH NO.: P0040984/S115490

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 12ft  
 QUANTITY INSPECTED: 12ft  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 2.125"  
 THICKNESS RECEIVED: 2.125"  
 SHEET SIZE ORDERED: —  
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL PER M-DRAWING	(Y)	N	ASTM A513
CORRECT THICKNESS	(Y)	N	
PHOTO REQUIRED	Y	(N)	
CORRECT REF # TO LINK CERT	(Y)	N	HT: 14300448
CORRECT MATERIAL IDENTIFICATION	(Y)	N	
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	

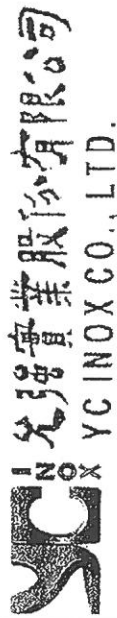
CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>  <i>AS</i>  </u>	SIGNED OFF BY: _____
DATE: <u>  18/10/03  </u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

002336



## INSPECTION CERTIFICATE

EN 10204-3.1:2004

No.270,Sec.4,Jungshan Rd.,Shijou Shiang,  
Chang-Hwa,Taiwan,R.O.C  
http://www.ycinox.com  
TEL : +886-4-8899666 FAX : +886-4-8899770



Customer		Customer No.	FCA027	Certificate No.	180718P0113
Product	STAINLESS STEEL WELDED TUBE	Commercial Invoice No.	J18070022	Date of Issue	2018/07/18
Specification	ASTM A554-16	PO No.	P010185	Order No.	EP18050236-1
Steel Grade	MT-804	Finish	MILL	Weight No.	C18070248

Item No.	Heat No.	Product Description	Chemical Composition(%)										Tension Test				*01			
			Dimension										Tension Test							
			Specification										Tension Test							
			Quantity Pcs		Min. Max.														HRB	
1	TBK060596	3/4"(19mm)x3/4"(19mm) x 0.049"(1.25mm) x 20FT	200		80	100	200	45	30	1100	2000	800	1800							
2	TBK060634	1"(25.4mm)x1"(25.4mm) x 0.12"(3.05mm) x 20FT	100		54	42	106	33	2	811	1814	294	674	58	87					
3	TBK062680	1 1/4"(31.8mm)x1 1/4"(31.8mm) x 0.12"(3.05mm) x 20FT	25		54	45	107	31	2	804	1821	308	672	53	85					
4	TBK053580	1 1/2"(38.1mm)x1 1/2"(38.1mm) x 0.12"(3.05mm) x 20FT	42		44	45	82	33	2	809	1801	277	638	55	83					
5	TBK071170	1 1/2"(38.1mm)x1 1/2"(38.1mm) x 0.12"(3.05mm) x 20FT	83		42	54	107	31	2	804	1821	308	672	53	85					
6	TBK061191	2"(50.8mm)x2"(50.8mm) x 0.12"(3.05mm) x 20FT	30		54	52	163	29	1	800	1810	292	648	55	86					
7	TBK051209	2"(50.8mm)x2"(50.8mm) x 0.12"(3.05mm) x 20FT	90		30	54	45	107	31	2	804	1821	308	672	53	85				
8	TBK062452	2"(50.8mm)x2"(50.8mm) x 0.12"(3.05mm) x 20FT	30		44	45	82	33	2	809	1801	277	638	55	83					
9	TBK051018	2"(50.8mm)x2"(50.8mm) x 0.12"(3.05mm) x 20FT	20		22	38	139	20	3	803	1821	299	640	55	83					
10	TBK051809	2"(50.8mm)x2"(50.8mm) x 0.180"(4.57mm) x 20FT	30		20	40	140	34	1	804	1814	309	643	54	84					
11	TBK050322	2"(50.8mm)x2"(50.8mm) x 0.250"(6.35mm) x 20FT	15		44	48	87	31	4	813	1810	297	612	57	84					
12	TBK060323	2 1/2"(63.5mm)x2 1/2"(63.5mm) x 0.180"(4.57mm) x 20FT	10		44	48	87	31	4	813	1810	297	612	57	84					
13	TBK041093	2 1/2"(63.5mm)x2 1/2"(63.5mm) x 0.250"(6.35mm) x 20FT	10		22	40	142	29	2	804	1810	332	652	53	87					
14	TBK041092	3"(76.2mm)x3"(76.2mm) x 0.12"(3.05mm) x 20FT	15		53	55	87	33	3	808	1813	322	649	54	88					
15	TBK020282	3"(76.2mm)x3"(76.2mm) x 0.12"(3.05mm) x 20FT	15		23	40	139	28	1	804	1808	318	648	54	86					
16	TBK070341	3"(76.2mm)x3"(76.2mm) x 0.12"(3.05mm) x 20FT	15		45	47	86	32	2	811	1820	283	632	54	83					
17	TBK051779	4"(101.6mm)x4"(101.6mm) x 0.12"(3.05mm) x 20FT	20		20	40	140	34	1	804	1814	308	643	54	84					
18	TBK040233	4"(101.6mm)x4"(101.6mm) x 0.12"(3.05mm) x 20FT	6		47	42	90	35	6	812	1819	270	617	56	80					
19	TBK061999	4"(101.6mm)x4"(101.6mm) x 0.12"(3.05mm) x 20FT	9		44	52	86	38	3	807	1831	268	627	56	81					
					TOTAL:															
					760															

Remark			Tensile test value references to raw material. Hardness test value references to raw material.														
Surveyor By			Visual Inspection(Surface) and Dimension Check : OK														
N/A			1. ISO 9001:2015 (No.01: 100 056298) 2. PED / AD2000 (No.01: 202 TWIN/Q-05 0105) 3. ISO 14001:2004 (No.01: 104 822 096385) 4. ONAS 18001:2007 (No.01: 113 822 096385)														
			1MPa=1N/mm <sup>2</sup> =10bar=145psi=10.2kgf/cm <sup>2</sup> Manager of Quality Assurance Department Jay Chen														

PURCHASE MATERIAL: AISI 304/316 STAINLESS STEEL SQUARE TUBING

FINISH: D ASTM A554 MILL FINISH  
OR ASTM A269 MILL FINISH

PART NUMBER: M304TS | A.AAA | W | TTT | WALL

PART NUMBER: EG. 0.75" X 0.75" X 0.049 WALL = M304TS0.750W.049

WHERE: A.AAA = WIDTH IN INCHES  
TTT = WALL THICKNESS IN INCHES

RELEASED  
R 2014-05-26

D	"SEAMLESS" REMOVED FROM PURCHASE MATERIAL SPECIFICATION (SEE NCR14-3816)	DB	14.05.20
C	"SEAMLESS" ADDED TO PURCHASE MATERIAL. ASTM A269 ADDED TO FINISH. REASON: SPEC ADDED FOR 1/2" TUBING	AJS	08.10.16
B	DRAWING MOVED TO "B" SIZE BORDER. FINISH ADDED (SEE NCR 08-045 FOR DETAILS).	AJS	08.08.28
A	NEW ISSUE	DS	01.06.08
REV.	DESCRIPTION	BY	DATE
DESIGN	DS	DB	
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	14.05.20		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
DRAWING NO. M304TS			
REV. D SHEET 1 OF 1			
TITLE 304/316 SQUARE TUBING			
SCALE NONE			
DATE 14.05.20			
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## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M304750.750W.049  
 DATE: 18/10/03

PO / BATCH NO.: P0040984/5115491

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 600ft  
 QUANTITY INSPECTED: 600ft  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 0.750"  
 THICKNESS RECEIVED: 0.750"  
 SHEET SIZE ORDERED: —  
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL PER M-DRAWING	(Y)	N	ASTM A554
CORRECT THICKNESS	(Y)	N	
PHOTO REQUIRED	Y	(N)	
CORRECT REF # TO LINK CERT	(Y)	N	HT: TBK060596
CORRECT MATERIAL IDENTIFICATION	(Y)	N	
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	

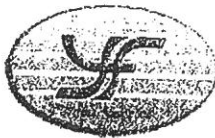
CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u>	SIGNED OFF BY: _____
DATE: <u>18/10/03</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

Ye fong



Certified Test Report

Aluminium Industrial LTD.

#12-10, Dongshi, Dongming Village,  
Xinwu Dist., Taoyuan, Taiwan

<http://www.ye-fong.com/>

[alu@ye-fong.com](mailto:alu@ye-fong.com)

+886-3-477-3677

Cert No: 180517021

Cert No: 180517021			
Customer PO Number:	Customer Part Number:	Alloy-Temper:	Dimension:
18012/10036	1/2" X .058" X 12'	6061-T6	12.7X1.47X3658L
Cast Number:	M/O (LOT NO.):	Weight:	Quantity: Product Description:
171229A6	180208001-3	614.03LB	540pcs Drawn Seamless Tube
Sold to:	Ship to:		
AluSil International	AluSil International		
Specification:			
ASTM B210-12; AMS-WW-T-700/6C; AMS 4082P			

Chemical Composition Limits (in weight %)

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	OtherMax	OtherTotal	Al
Max	0.8	0.7	0.4	0.15	1.2	0.35	0.25	0.15	0.05	0.15	Rem
Min	0.4	0	0.15	0	0.8	0.04	0	0	0	0	Rem
Actual	0.578	0.193	0.25	0.0298	0.908	0.125	0.0226	0.021	0.0145	0.0271	Rem

Physical Properties

	U.T.S	Y.T.S	Elongation	Hardness	EC
Requirement	≥42	≥35	≥12		
Actual	47.94	43.47	12.2	56.0	
Unit	ksi	ksi	%	HRB	

Notes:

1. We certify that the material is free from mercury contamination.
2. Country of Origin: Made in Taiwan.

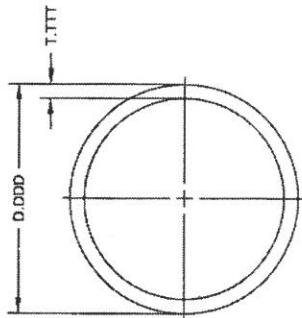
We hereby certify that the material covered in this report has been inspected in accordance with, and has been found to meet the applicable requirements described herein, including specifications forming a part of description. Manufactured in Taiwan and under a quality management system certified to ISO9001, TS16949, AS9100 and NADCAP.

Brian Yang

, Quality Manager

Date: 17 May 2018

QP-014-30-02



PURCHASE MATERIAL: 6061-T6/T62/T6510/T6511 SEAMLESS TUBING

SPECIFICATION:

WW-T-700/8  
OR QQ-A-200/8 OR QQ-A-225/8  
OR AMS 4083 OR AMS 4082 OR AMS 4083  
OR ASTM B210 OR ASTM B241

PART NUMBER:

M6061T6T.D.DDD/T.TTT  
OD WALL

WHERE "D.DDD" = OD IN INCHES  
"T.TTT" = WALL THICKNESS

EG. 3/8" OD X 0.058 WALL = M6061T6T0.375W0.058

MATERIAL TOLERANCE:

PER ANSI H35.2

RELEASED  
2013-07-02

C	COMPLETE REFORMAT, ADDED T6510 & T6511. ADDED AMS 4083, ASTM B210 & ASTM B241 ADDED MATERIAL TOLERANCE	AJS	13.06.12
B	ADD QQ-A-200/8 & QQ-A-225/8	CP	04.01.23
A	NEW ISSUE	DS	01.06.21
REV.	DESCRIPTION	BY	DATE
DESIGN	AJS		
DRAWN	AJS		
CHECKED	W		
MFG. APPR.	W		
APPROVED	W		
DE APPR.	W		
DATE	13.06.12		
<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA DRAWING NO. M6061T6T TITLE 6061-T6 TUBING REV. C SHEET 1 OF 1 SCALE NTS DATE 13.06.12			
<small>COPYRIGHT © 2001 BY DART AEROSPACE LTD  THIS DRAWING IS THE PROPERTY OF DART AEROSPACE LTD. IT IS TO BE USED ONLY FOR THE PURPOSES SPECIFIED THEREIN. NO PART OF THIS DRAWING IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION IN WRITING FROM DART AEROSPACE LTD.</small>			



## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M606176T0.500W.058

PO / BATCH NO.: PO 040984/S115492

DATE: 18/10/03

MATERIAL CERT REC'D: Yes

THICKNESS ORDERED: 0.500"

QUANTITY RECEIVED: 1684

THICKNESS RECEIVED: 0.500"

QUANTITY INSPECTED: 1684

SHEET SIZE ORDERED: —

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y (N)	
CORRECT FINISH	(Y) N	
CORROSION	Y (N)	
CORRECT GRAIN DIRECTION	(Y) N	
CORRECT MATERIAL PER M-DRAWING	(Y) N	ASTM B210
CORRECT THICKNESS	(Y) N	
PHOTO REQUIRED	Y (N)	
CORRECT REF # TO LINK CERT	(Y) N	MT: 17122946
CORRECT MATERIAL IDENTIFICATION	(Y) N	
CORRECT M# ON THE MATERIAL	(Y) N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y (N)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y (N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u>	SIGNED OFF BY: _____
DATE: <u>18/10/03</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

CERTIFICAT D'ANALYSE

DART AEROSPACE LTD  
 1270, ABERDEEN STREET  
 HAWKESBURY, ONTARIO  
 K6A 1K7

25 sept. 2018

Part Number	Description	Shipped Qty
MST30000		

4,232 Pounds

Plate 3 4140/42 Prehard

34.18750 x 144.31250

ASTM A-829

DFARS Compliant

Country of Origin: SLOVENIA

Lot: 426556A

PM Heat: 94802

BHN: 304

C: 0.4080

Mn: 0.7580

P: 0.0080

S: 0.0010

Si: 0.2350

Cr: 0.9500

Mo: 0.1800

Cu: 0.2500

V: 0.0350

Ni: 0.1100

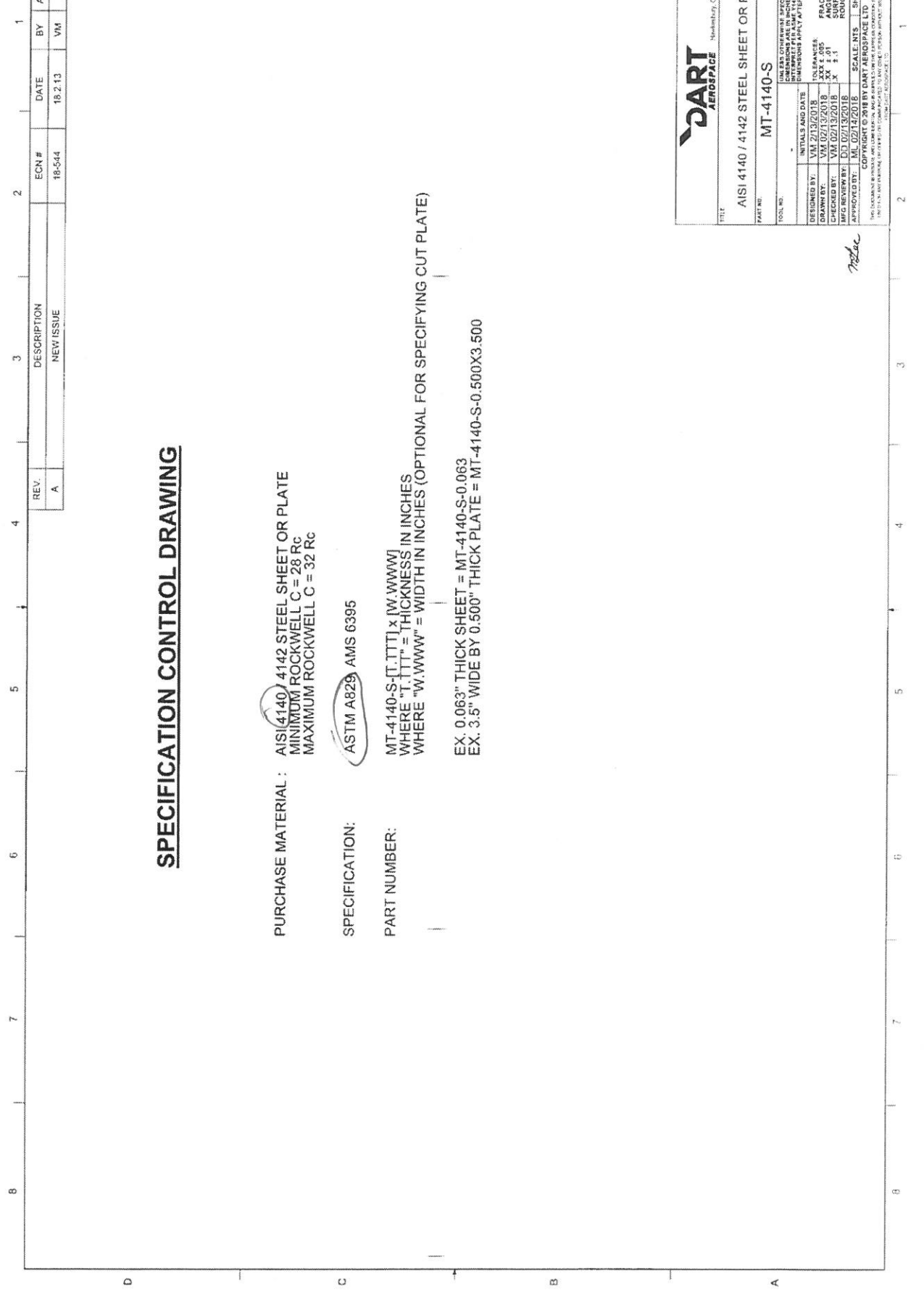
ITEM 3: 1 X 3.5" X 96"

COMMANDE: 138058

REF: 40984

Métaux Solutions inc. certifie que les analyses sur ce document sont exactes et que le matériel rencontre les spécifications énumérées.

*M. Paquette*  
 Préparé par



**SPECIFICATION CONTROL DRAWING**


PURCHASE MATERIAL : AISI 4140 / 4142 STEEL SHEET OR PLATE  
MINIMUM ROCKWELL C = 28 Rc  
MAXIMUM ROCKWELL C = 32 Rc

SPECIFICATION: ASTM A829 AMS 6395

PART NUMBER:  
MT-4140-S-T.TTTI x IW.WWW  
WHERE "T.TTT" = THICKNESS IN INCHES  
WHERE "W.WWW" = WIDTH IN INCHES (OPTIONAL FOR SPECIFYING CUT PLATE)

EX. 0.063" THICK SHEET = MT-4140-S-0.063  
EX. 3.5" WIDE BY 0.500" THICK PLATE = MT-4140-S-0.500X3.500

REV.	DESCRIPTION	ECN #	DATE	BY	APPROVED
A	NEW ISSUE	18-544	18.2.13	VM	ML



Markham, Ontario, Canada

TITLE	
AISI 4140 / 4142 STEEL SHEET OR PLATE	
PART NO.	REV
MT-4140-S	A
TOOL NO.	
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES DIMENSIONS APPLY AFTER FINISHING	
DESIGNED BY: VM 27/3/2018	TOLERANCES
DRAWN BY: VM 02/13/2018	FRACTIONS ± 1/8
CHECKED BY: VM 02/13/2018	DECIMALS ± 0.01
DATE: 02/13/2018	ANGLES ± 1°
APPROVED BY: ML 02/13/2018	ROUNDS ± 0.1
SCALE: NTS	
SHEET 1 OF 1	
COPYRIGHT © 2018 BY DART AEROSPACE LTD	
THIS DOCUMENT IS UNCLASSIFIED AND IS AVAILABLE FOR THE LIMITED CONDITION: PART 1 OF 1 IN THE PUBLIC DOMAIN. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.	

*ML*

## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M7-4/40-5-3.000x3.500  
 DATE: 18/10/03

PO / BATCH NO.: P004084/5115493

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 8ft  
 QUANTITY INSPECTED: 8ft  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 3.000"  
 THICKNESS RECEIVED: 3.000"  
 SHEET SIZE ORDERED: -  
 SHEET SIZE RECEIVED: -

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="radio"/>	
CORRECT FINISH	<input checked="" type="radio"/>	N	
CORROSION	Y	<input checked="" type="radio"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/>	N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/>	N	ASTM A-829
CORRECT THICKNESS	<input checked="" type="radio"/>	N	
PHOTO REQUIRED	Y	<input checked="" type="radio"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/>	N	M7:94802
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/>	N	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/>	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="radio"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="radio"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL SIZE OF TEST SAMPLE HARDNESS / DUROMETER READING	HRC	HRB	DUR A	DUR D	WEBSTER

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AK</u>	SIGNED OFF BY: _____
DATE: <u>18/10/03</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

CERTIFICAT D'ANALYSE

DART AEROSPACE LTD  
1270, ABERDEEN STREET  
HAWKESBURY, ONTARIO  
K6A 1K7

25 sept. 2018

MST05000

728 Pounds

Plate 1/2 4140/42 Prehard

34.06250 x 143.56250

ASTM A-829

DFARS Compliant

Country of Origin: SLOVENIA

Lot: 509805b

PM Heat: 96017

BHN: 299

C: 0.4030

Mn: 0.7520

P: 0.0090

S: 0.0010

Si: 0.2330

Cr: 0.9300

Mo: 0.1700

Cu: 0.1940

V: 0.0360

Ni: 0.1400

ITEM 5: 1 X .500" X 144R/L"

COMMANDE : 138058

REF: ~~AD884~~ 41051

Métaux Solutions inc. certifie que les analyses sur ce document sont exactes et que le matériel rencontre les spécifications énumérées.

*M. Paquette*  
Préparé par

REV.	DESCRIPTION	ECN #	DATE	BY	APPROVED
A	NEW ISSUE	18-544	18.2.13	VM	ML

## SPECIFICATION CONTROL DRAWING

PURCHASE MATERIAL : AISI 4140 / 4142 STEEL SHEET OR PLATE  
 MINIMUM ROCKWELL C = 28 Rc  
 MAXIMUM ROCKWELL C = 32 Rc

SPECIFICATION: ASTM A829, AMS 6395

PART NUMBER: MT-4140-S-[T.TTT] x [W.WWWW]  
 WHERE "T.TTT" = THICKNESS IN INCHES  
 WHERE "W.WWWW" = WIDTH IN INCHES (OPTIONAL FOR SPECIFYING CUT PLATE)

EX. 0.063" THICK SHEET = MT-4140-S-0.063  
 EX. 3.5" WIDE BY 0.500" THICK PLATE = MT-4140-S-0.500X3.500

<b>DART AEROSPACE</b> Newbury, Ontario, Canada	
TITLE: AISI 4140 / 4142 STEEL SHEET OR PLATE	
PART NO.	REV
MT-4140-S	A
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DIMENSIONS APPLY AFTER FINISHING	
DESIGNED BY: VM 2/13/2018	TOLERANCES
DRAWN BY: VM 02/13/2018	XX ± .05
CHECKED BY: VM 02/13/2018	XX ± .01
APPROVED BY: VM 02/13/2018	XX ± .1
SCALE: NTS	FINISHES: 1.08
COPYRIGHT © 2018 BY DART AEROSPACE	ANGLES: 1.08
	SURFACE: 1.08
	ROUGHNESS
	SHEET 1 OF 1

## MATERIAL RECEIPT INSPECTION FORM

MATERIAL: MT-4140-S-0.500x0.500

PO / BATCH NO.: P0040984/S115351

DATE: 18/10/03

MATERIAL CERT REC'D: Yes

THICKNESS ORDERED: 0.500"

QUANTITY RECEIVED: 12ft

THICKNESS RECEIVED: 0.500"

QUANTITY INSPECTED: 12ft

SHEET SIZE ORDERED: —

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y <input checked="" type="radio"/> N <input type="radio"/>	
CORRECT FINISH	<input checked="" type="radio"/> Y <input type="radio"/> N	
CORROSION	Y <input type="radio"/> N <input checked="" type="radio"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="radio"/> Y <input type="radio"/> N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="radio"/> Y <input type="radio"/> N	ASTM A-89
CORRECT THICKNESS	<input checked="" type="radio"/> Y <input type="radio"/> N	
PHOTO REQUIRED	Y <input type="radio"/> N <input checked="" type="radio"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="radio"/> Y <input type="radio"/> N	MT-96017
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="radio"/> Y <input type="radio"/> N	
CORRECT M# ON THE MATERIAL	<input checked="" type="radio"/> Y <input type="radio"/> N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y <input type="radio"/> N <input checked="" type="radio"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y <input type="radio"/> N <input checked="" type="radio"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u>	SIGNED OFF BY: _____
DATE: <u>18/10/03</u>	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

# CERTIFICATE OF TEST CERTIFICAT D'ESSAIS

Page 01 of 03

CUSTOMER ORDER NUMBER  
NUMÉRO DE COMMANDE DU CLIENT

Certification Date  
3-MAY-2018

44673-M  
PART NUMBER/NUMÉRO DE PIÈCE  
506440

Invoice Number  
S706659

SOLD TO: METAUX SOLUTIONS INC.  
VENDU À:

SHIP TO:  
EXPÉDIÉ À:

METAUX SOLUTIONS (RIVE-SUD)

2625 BOUL JACQUES CARTIER EST  
LONGUEUIL QC J4N 1L7

2625 BOUL JACQUES CARTIER EST  
LONGUEUIL QC J4N 1

Description: 4140/4142 HR HT BAR STRESS FREE 269/321 BHN  
3 RD X 20' R/L  
HEAT: 52041117  
ITEM: 506440  
Line Total: 1109.166 LB

## Specifications:

ASTM A193 GR B7 10  
AISI 4140/42  
ASTM A255 10  
ASTM E114 10  
ASTM A370 14  
ASTM E45 13

ASTM A434 GR BC 06  
ASTM A388 11  
ASTM A304 11  
ASTM E381 01  
ASTM E10  
ASTM A751 CHEM 11

ASME SA193 GR B7 00  
ASTMA29 12  
ASTM A322 07  
EN 10204 TYPE 3.1 04  
ASTM E112 12  
CAT 1E0038

## CHEMICAL ANALYSIS

C	MN	SI	P	S	CR	NI	MO
0.41	0.93	0.27	0.011	0.019	0.93	0.10	0.192
AL	CU	SN	V	B	H		
0.028	0.20	0.013	0.003	0.0003	0.0003		

RCPT: R433525

COUNTRY OF ORIGIN : MEXICO

## MECHANICAL PROPERTIES

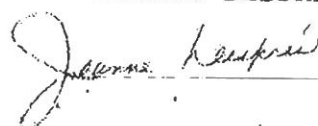
DESCRIPTION	YLD STR KSI	ULT TEN KSI	%ELONG IN 02 IN	%RED IN AREA	HARDNESS BHN
	110.0	133.0	17.9	55.4	309

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination. /Les informations ci-haut-mentionnées sont transcrites du certificat d'essais du manufacturier après vérification de l'état complet des spécifications inscrites sur le certificat. We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes. /Les informations fausses, fictives ou frauduleuses en rapport avec le résultat des essais sont punissables en vertu des lois fédérales.

Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

JOANNE DESPRES



MANAGER QUALITY ASSURANCE  
GÉRANT DE L'ASSURANCE QUALITÉ



# CERTIFICATE OF TEST CERTIFICAT D'ESSAIS

Page 02 of 03

CUSTOMER ORDER NUMBER  
NUMÉRO DE COMMANDE DU CLIENT

Certification Date  
3-MAY-2018

44673-M  
PART NUMBER/NUMÉRO DE PIÈCE

Invoice Number  
S706659

506440

<b>SOLD TO:</b>	METAUX SOLUTIONS INC.	<b>SHIP TO:</b>	METAUX SOLUTIONS (RIVE-SUD)
<b>VENDU À:</b>	2625 BOUL JACQUES CARTIER EST LONGUEUIL QC J4N 1L7	<b>EXPÉDIÉ À:</b>	2625 BOUL JACQUES CARTIER EST LONGUEUIL QC J4N 1

Description: 4140/4142 HR HT BAR STRESS FREE 269/321 BHN  
3 RD X 20' R/L  
HEAT: 52041117  
END-QUENCH HARDENABILITY (JOMINY - RC)  
ITEM: 506440  
Line Total: 1109.166 LB

1	2	3	4	5	6	8	10	12	14	16	20	24	28	32
57	57	57	57	57	57	57	54	51	50	48	47	44	42	40

IDEAL DIAMETER : 5.6 IN GRAIN SIZE : 6 - 8

CLEANLINESS

	A		B		C		D	
	THIN MAX	THICK MAX	THIN MAX	THICK MAX	THIN MAX	THICK MAX	THIN MAX	THICK MAX
e45	2.0	0.0	1.0	0.0	0.5	0.0	1.0	0.0

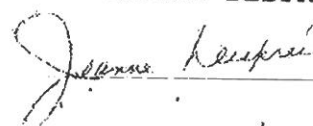
VACUUM DEGASSED MATERIAL IS FREE FROM MERCURY CONTAMINATION  
NO WELD REPAIR PERFORMED ON MATERIAL  
ULTRASONIC: YES  
THERMAL TREATMENT: OK  
AUSTENITIZED AT 1607 DEG F BY: 110 MIN  
QUENCHED IN: WATER SPRAY AT 75 DEG F  
TEMPERED AT 1173 DEG F BY 117 MIN.  
COOLED IN AIR AT TEMPERATURE ROOM  
STRESS FREE  
DECARB: OK  
MACRO: OK  
MICRO1: OK

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination. /Les informations ci-haut-mentionnées sont transcrites du certificat d'essais du manufacturier après vérification de l'état complet des spécifications inscrites sur le certificat. We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes. /Les informations fausses, fictives ou frauduleuses en rapport avec le résultat des essais sont punissables en vertu des lois fédérales.

Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

JOANNE DESPRES



MANAGER QUALITY ASSURANCE  
GÉRANT DE L'ASSURANCE QUALITÉ

# CERTIFICATE OF TEST CERTIFICAT D'ESSAIS

Page 03 of 03

CUSTOMER ORDER NUMBER  
NUMÉRO DE COMMANDE DU CLIENT

Certification Date  
3-MAY-2018

44673-M  
PART NUMBER/NUMÉRO DE PIÈCE  
506440

Invoice Number  
S706659

SOLD TO: METAUX SOLUTIONS INC.  
VENDU À:

SHIP TO:  
EXPÉDIÉ À:

2625 BOUL JACQUES CARTIER EST  
LONGUEUIL QC J4N 1L7

METAUX SOLUTIONS (RIVE-SUD)

2625 BOUL JACQUES CARTIER EST  
LONGUEUIL QC J4N 1

Description: 4140/4142 HR HT BAR STRESS FREE 269/321 BHN  
3 RD X 20' R/L

HEAT: 52041117

ITEM: 506440

Line Total: 1109.166 LB

## COMMENTS

red. ratio 5.61

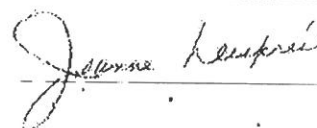
free from radioactive contamination

The above data were transcribed from the manufacturer's Certificate of Test after verification for completeness and specification requirements of the information on the certificate. All test results remain on file subject to examination. /Les informations ci-haut-mentionnées sont transcrites du certificat d'essais du manufacturier après vérification de l'état complet des spécifications inscrites sur le certificat. We hereby certify that the material covered by this report will meet the applicable requirements described herein, including any specification forming a part of the description. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

The willful recording of false, fictitious, or fraudulent statements in connection with test results may be punishable as a felony under federal statutes. /Les informations fausses, fictives ou frauduleuses en rapport avec le résultat des essais sont punissables en vertu des lois fédérales.

Material did not come in contact with mercury while in our possession. /Par les présentes, nous certifions que le matériel couvert par ce rapport rencontre les spécifications décrites ci-haut.

JOANNE DESPRES



MANAGER QUALITY ASSURANCE  
GÉRANT DE L'ASSURANCE QUALITÉ

**DART**

DESIGN #	DRAWN BY #	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED #	APPROVED #	DRAWING NO. M4140H-R	REV. A SHEET 1 OF 1
DATE 05.02.21		TITLE 4140 ROUND BAR	SCALE 1:1
A	05.02.21	NEW ISSUE	

PURCHASE MATERIAL: AISI 4140H ROUND BAR

PER AISI 4140 OR ASTM A304-02 / A-434-BC /

-A193-03-GRADE-B7 / -A29-03 / -A322-91 OR

UNS # - G41400

MINIMUM ULTIMATE TENSILE STRENGTH = 100 ksi

MINIMUM YIELD TENSILE STRENGTH = 66 ksi

PART NUMBER: M4140H-R | D.DDD | WHERE D.DDD = DIAMETER IN INCHES  
DIA

EG. 7/8" ROUND BAR = M4140H-R0.875

RELEASED  
05.03.25 #

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# MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M4140H-R3.000  
 DATE: 18/10/03

PO / BATCH NO.: PO 040984/S115494

MATERIAL CERT REC'D: Yes  
 QUANTITY RECEIVED: 6ft  
 QUANTITY INSPECTED: 6ft  
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 3.000"  
 THICKNESS RECEIVED: 3.000"  
 SHEET SIZE ORDERED: —  
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	<input checked="" type="checkbox"/>	
CORRECT FINISH	<input checked="" type="checkbox"/>	N	
CORROSION	Y	<input checked="" type="checkbox"/>	
CORRECT GRAIN DIRECTION	<input checked="" type="checkbox"/>	N	
CORRECT MATERIAL PER M-DRAWING	<input checked="" type="checkbox"/>	N	ASTM A434
CORRECT THICKNESS	<input checked="" type="checkbox"/>	N	
PHOTO REQUIRED	Y	<input checked="" type="checkbox"/>	
CORRECT REF # TO LINK CERT	<input checked="" type="checkbox"/>	N	UT: S2041117
CORRECT MATERIAL IDENTIFICATION	<input checked="" type="checkbox"/>	N	
CORRECT M# ON THE MATERIAL	<input checked="" type="checkbox"/>	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	<input checked="" type="checkbox"/>	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	<input checked="" type="checkbox"/>	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u> DATE: <u>18/10/03</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in